REMARKS

This application has been carefully reviewed in light of the Office Action dated January 24, 2005. Claims 1, 2, 4 to 14, 16 to 21, 23 to 33, 35 to 40, 42 to 52, 54 to 59, 61 to 71 and 73 to 76 remain in the application, of which Claims 1, 20, 39 and 58 are independent. Reconsideration and further examination are respectfully requested.

Claims 1, 2, 20, 21, 39, 40, 58 and 59 have been rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,433,882 (Mori), and Claims 4 to 14, 16 to 19, 23 to 33, 35 to 38, 42 to 52, 54 to 57, 61 to 71 and 73 to 76 have been rejected under 35 U.S.C. § 103(a) over Mori in view of U.S. Publication No. 2002/0101604 (Mima). Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention concerns printing of divided print data by a plurality of printers. According to the invention, data is designated for distributed printing in an application, whereby the data is converted into device-independent-format data by a distributed printing printer driver that is independent of each of a plurality of printer drivers corresponding to a plurality of printers. For example, as seen in Fig. 6, a DP Printer 1201 (which may be a virtual printer) receives print data from an application 11. A printer driver of the virtual printer converts the data into a format independent from any particular printer, but which can be understood by a printer driver of each one of a plurality of printers, and spools the device-independent-format data. From the spooled data, a plurality of pieces of divided print data (formed in a device-independent-format) are generated for distribution printing. The generated plurality of pieces of divided print data are then output to respective corresponding printer drivers such that a plurality of pieces of print data, are generated in a device-dependent format, and are output to the respective ones of the plurality of printers. Thus, even though print data may be divided to be output to different

types of printers, since the device-independent-format data is divided and provided to the printer drivers, which are capable of capable of describing the print jobs in different printer languages, each respective portion of the print data can be processed by the respective printer driver according to the particular type of printer.

With specific reference to the claims, amended independent Claim 20 is an information processing method for dividing print data and having a plurality of printer drivers that generate a plurality of print jobs make a plurality of printers execute a print process, comprising a spooling step of spooling device-independent-format data converted from data provided by an application, the spooled device-independent-format data being converted by a distributed printing printer driver that is independent of each of the plurality of printer drivers corresponding to the plurality of printers, an assignment step for generating from the device-independent-format data spooled by the spooling step, a plurality of pieces of divided print data for distribution printing, the divided print data being formed in a device-independent-format, an output step for outputting the plurality of pieces of divided print data generated by the assignment step to respective corresponding printer drivers, and an output control step of outputting a plurality of pieces of print data, generated in a device-dependent format from the respective ones of the plurality of pieces of divided print data output by the output step, to the respective ones of the plurality of printers, wherein the assignment step is able to assign the plurality of pieces of divided print data in the device-independent format to the printer drivers that generate different types of print data, and the plurality of print jobs are able to be described in respective different printer languages by the plurality of printer drivers.

Amended independent Claims 1, 39 and 58 are apparatus, computer-medium and computer program claims, respectively, that substantially correspond to Claim 20.

The applied art, alone or in any permissible combination, is not seen to disclose or to suggest the features of Claims 1, 20, 39 and 58, and in particular, is not seen to disclose or to suggest at least the feature of spooling device-independent-format data converted from data provided by an application, where the spooled device-independent-format data is converted by a distributed printing printer driver that is independent of each of the plurality of printer drivers corresponding to the plurality of printers, generating, in a device-independent format from the spooled device-independent-format data, a plurality of pieces of divided print data for distribution printing, and outputting the plurality of pieces of divided print data to respective corresponding printer drivers that are capable of describing the print data in different printer languages.

Mori is seen to disclose that device-independent-format data (EMF files) are spooled by a page unit. That is, when a job is to be printed, the job is separated into units of pages, with each page being generated into its own EMF file. Then, each EMF file for each page can then be processed according to a command for special processing of the file (e.g., multi-page printing, overlap printing, changing of page order). Then, a spooler combines all of the individual EMF files into a single new print job for submission to the selected printer. Thus, while Mori may separate a print job into separate EMF files, the separated files are not destined for multiple/different printers. Nor do Applicants see how the separated EMF files of Mori could be submitted to different printers since the user merely selects one printer to submit the data to. Thus, Mori is not seen to disclose or to suggest the features of the present invention.

Mima is merely seen to perform parallel printing in a environment where a plurality of printers are connected to a network. Mima assigns print data, in a device-dependent-format generated by a single printer driver 23, to a plurality of printer systems 9, 11, 13, each of which then generates print job agents 25a-25c. Thus, Mima merely assigns print data generated by one printer driver to a plurality of devices and therefore, the printer systems must be able to print the same type of print data generated by the single printer driver. Therefore, Mima is not seen to disclose or to suggest anything that, when combined with Mori, would have resulted in the feature of spooling device-independent-format data converted from data provided by an application, where the spooled device-independent-format data is converted by a distributed printing printer driver that is independent of each of the plurality of printer drivers corresponding to the plurality of printers, generating, in a device-independent format from the spooled device-independent-format data, a plurality of pieces of divided print data for distribution printing, and outputting the plurality of pieces of divided print data to respective corresponding printer drivers that are capable of describing the print data in different printer languages. Accordingly, Claims 1, 20, 39 and 58, as well as the claims dependent therefrom, are believed to be allowable over Mori and Mima.

In view of the foregoing, it is believed that the entire application is in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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